GTA 80-01-003

Survival, Evasion, and Recovery

Tactics, Techniques, and Procedures
June 2011

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1000 days of evasion are better than one day of captivity.

PLANNING: 1

- Construct an Evasion Plan of Action (EPA) and leave with Higher [at a minimum, confirm Isolated Soldier Guidance (ISG)]
- Ensure equipment is on hand to execute ISG or EPA
- Follow plan as closely as permitted

All missions require ISG!

WHEN AM I ISOLATED? 2
Examples of Isolation Criteria

Isolation criteria define when Soldiers should execute their ISG. Examples include:

- Individual or group has no communication with unit or higher headquarters for specified time period
- Individual or group has no contact with fellow unit members for specified time period
- Individual or group's ground vehicle becomes separated from the rest of the convoy
- Individual or group encounters and is surrounded by unexpected enemy, hostile, or criminal forces
- Directed by Higher to execute ISG or EPA

When isolation criteria are met, initiate a Personnel Recovery (PR) Report.

WHAT ACTIONS DO I TAKE? 3
Immediate Actions

All personnel should report to Higher as soon as possible upon isolation!

- Assess the immediate situation
- Treat life-threatening injuries as necessary
- Execute ISG or EPA
- Gather vital survival and evasion equipment
- Destroy nonessential equipment that may be compromised or exploited
- Break immediate contact with enemy
  - Separate with distance and terrain
  - Use barriers and obstacles
- Use terrain and concealment to mask location or movement
- Locate hide site to formulate plan
- Use Isolated Personnel Report (ISOPREP) or PR code words to authenticate

S – Size up the situation *(surroundings, physical condition, equipment)*
U – Use all your senses *(undue haste makes waste)*
R – Remember where you are
V – Vanquish fear and panic
I – Improvise *(and improve)*
V – Value living
A – Act like the natives *(adapt, don't adopt)*
L – Live by your wits *(but train/equip before)*

WHAT DO I COMMUNICATE? 4
When Isolated

Seven-Line PR Report	
Line 1	**Call sign and suffix**
Line 2	**Location of isolated personnel (IP)** A. Grid coordinates B. Description of area
Line 3	**Number and condition of IP** A. Litter B. Ambulatory C. Injuries
Line 4	**Special equipment needed** A. Hoist B. Medical C. Litters
Line 5	**Signals** A. Communications equipment/frequencies B. Signaling equipment
Line 6	**Recovery site description** A. Grid coordinates B. Size C. Obstacles (18" high or deep) D. Terrain—only if critical **or** in permissive area of operations
Line 7	**Enemy (SALUTE)** • **S**ize • **A**ctivity • **L**ocation • **U**niform • **T**ime • **E**quipment

WHAT ACTIONS DO I TAKE? 5
If Movement Is Required

Travel carefully—an evader is more at risk during movement.

- Move slowly and deliberately; use zigzag pattern
- Move in the direction noted in ISG or EPA
- Do not leave evidence of travel; cover or disguise tracks; use discipline with noise and light
- Mask movement using wind, rain, and natural cover and terrain
- Stop, look, listen, and smell often
- Move away from landing site/enemy contact
- Move uphill if possible
- In rural areas, stay away from roads, paths, trails, natural lines of drift, etc.
- Move from one concealed location to another
- Never silhouette yourself
  - Stay off of ridgelines, 2/3 of the way up a hill
- Locate and use hide sites and hole-up sites
- **Urban areas**. Avoid congested areas, disguise clothing (wear local garb), act like you belong, walk in the same manner and pace as the locals

	Pros	Cons
Day	• Patrol link-up • Samaritan link-up • Signaling • Ease of navigation	• Compromise • Direct enemy observation • Local observation
Night	• Concealment • Minimal local activity	• Difficulty navigating • Noise discipline

WHERE DO I GO IF ISOLATED? 6
Hide Site

B – Blend
L – Low silhouette
I – Irregular shape
S – Small
S – Secluded

Purpose
- Used during dangerous times when you cannot travel; to meet needs

Provides
- Concealment: ground and air
- Listening and observation points
- Multiple avenues of escape
- Protection from environment
- Communication and signaling opportunities
- Safe distance from enemy positions and lines of communication (LOC)

While at site
- Communicate in accordance with ISG or EPA
- Take precautions to ensure signaling devices do not compromise position
- Sanitize your area; hide equipment, trash, etc.
- Sanitize yourself:
  - Remove from uniform items that may be used against you (unit patches, maps or notebooks, etc.)
  - Hide equipment that may compromise the mission, unit, or other personnel
- Conduct a thorough medical assessment
- Apply personal camouflage if required
  - Blend in with the terrain
  - Blend in with the population (wear local garb)

WHERE DO I GO IF ISOLATED? 7
Hole-Up Site

Purpose
- Used when more time is required for rest; attend to medical issues; meet basic needs; signal
- Locate hole-up site once at Designated Area for Recovery (DAFR)

Provides
- Localized access to water and food
- Concealment—ground and air
- Listening and observation points
- Multiple avenues of escape
- Protection from environment
- Communication and signaling opportunities
- Safe distance from enemy positions and LOC
- Be wary of weather extremes in the area (i.e., flash floods in ravines and canyons)

While at site
- Establish contact in accordance with ISG or EPA
- Take precautions to ensure signaling devices do not compromise position
- Review plan of action; establish priorities
- Reassess situation
- Inventory equipment
- Determine specific location
- Improve camouflage

Move from hole-up site only if required because of enemy activity or to move to recovery site!

WHAT SIGNALS DO I USE? 8
Methods of Signaling

- Use terrain to your advantage
  - Move to a higher vantage point for better line of sight (LOS) communication
- Signal friendly forces in accordance with your ISG or EPA

Types of signals
- **Pyrotechnic**. Prepare early (weather permitting, prepare for easy reach and signal)
- **Strobe**. Prepare early (consider filters for IR and shields for directional capability)
- **Signal mirror**. Use only with confirmed friendly forces, and cover when not in use; make a mirror from any shiny metal or glass pieces
- **Pattern signal**. Use man-made or natural materials; maximize visibility from above; conceal from ground observation; make as large as possible
- **Electronic**. Use personal locator beacons (PLBs), cell phones, and radios to report

Unconventional signals
- **Cell phones.** Call Tactical Operations Center (TOC) directly; keep phone number
- **Serial numbered currency.** Use on local economy; provides evidence of presence

Effective signaling occurs when your signal stands out from the background and makes someone (or something) stop and look.

HOW DO I LINK-UP? 9
Methods of Recovery

Types of recovery
- **Immediate**. Locate and recover IP by forces directly observing the isolating event
- **Deliberate**. Planned recovery; immediate recovery not feasible or was not successful
- **External Supported Recovery (ESR)**. External assets used for recovery by sister Services, other governmental organizations, coalition partners, and/or host nation when immediate or deliberate recovery not feasible or successful
- **Unassisted recovery**. Actions taken by IP to achieve their own recovery without outside assistance; must be trained/equipped to survive and move to nearest friendlies

Potential locations to aid recovery
- Humanitarian organizations (i.e., International Red Cross, Doctors Without Borders, Missionaries, Peace Corps, etc.)
- Friendly or sympathetic local nationals—approach with caution; use **blood chit** to incentivize assistance from locals (last resort)
- Host nation (HN) security forces or checkpoints—approach with caution
- Allied encampment, patrol, embassy, etc.

Your efforts are instrumental to your recovery!

HOW DO I LINK-UP? 10
Locate Recovery Site

Designated Area for Recovery (DAFR)
- Predetermined location to facilitate recovery
- Identified in your ISG or EPA
- Can be represented by a set coordinate or an area of specified size or location with respect to an isolating incident (i.e., northeastern most point of Lake Amelia; west side of hill 856)

Identifying site
- Select site(s) in accordance with criteria in Theater Recovery Plans
- Select best area for cover and concealment, communications, and signaling devices
- Site should provide ample opportunity for escape
- Site needs to be large enough to accommodate a recovery vehicle (e.g., air, land, or sea asset)
  - **CH-47**. Approximately 80-meter landing zone (LZ), free of obstructions and less than 15° slope
  - **UH-60/AH-64**. Approximately 50-meter LZ, free of obstructions and less than 15° slope
  - **UH-1/AH-1**. Approximately 35-meter LZ, free of obstructions and less than 7° slope
- Terrain masking from LOC and enemy positions afford rescue with as little risk as possible to enemy fire and exposure
- Be ready to establish contact with recovery forces once on scene, near/far recognition

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BEST PRACTICES: Communications and Recovery 11

Communications

- Face recovery asset while signaling
  - Face the equator, if transmitting in the blind
  - Keep antenna perpendicular to receiver
- **Do not** ground antenna (finger on antenna, attaching bolt, space blanket, or vegetation)
- Keep transmissions short (3–5 seconds)
  - Use data burst if available
- Use terrain masking to hinder direction finding
- Use radio in accordance with communication plan to conserve batteries and facilitate transmission reception

Recovery

- Ensure site is free of hazards or obstacles
- Be prepared to authenticate via ISOPREP data
- Observe/report enemy activity and hazards
- Stay concealed until recovery is imminent
- Secure weapon and equipment
- Empty hands and make them visible
- Follow recovery force instructions
- Make no sudden movements that could be interpreted as hostile
- Do not approach until instructed

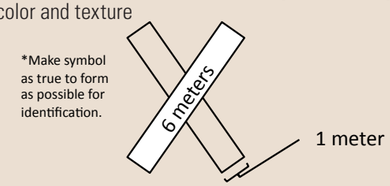
Allow metal on helicopter recovery device to contact ground before touching to avoid static discharge.

BEST PRACTICES: Pattern Signal 12

Use ground-to-air pattern signals from ISG or EPA.

Ground-to-Air Pattern Signals

- **Size**. Minimum of 6 meters. Elevated signals look larger because of shadows
- **Ratio**. 6 to 1 (length to width)
- **Angularity**. Straight lines and sharp angles stand out better from natural terrain
- **Contrast**. Contrast with terrain/vegetation using color and texture



- **Movement**. Easily detectable by an observer
- **Ground-to-air emergency code**. Basic pattern signals used in lieu of issued guidance

Message	Symbol
Require assistance	V
Require medical assistance	X
No or negative	N
Yes or affirmative	Y
Proceed in this direction	↑

BEST PRACTICES: Communications and Signaling 13

Type	Day	Night	Report	Locate
Radio/Data Burst [Combat Survivor Evader Locator (CSEL), PRC-112/148/152, etc.]	X	X	X	X
Personal Locator Beacon (PLB)	X	X	X	X
Blue Force Tracker (BFT) (emergency code/message)	X	X	X	X
Cellular/Iridium Phone	X	X	X	X
Ground-To-Air Pattern Signal (ground-to-air or strip signal)	X		X	X
Laser (red or green)	X	X		X
MK-13/MK-124 Flares	X	X		X
Fire (International distress: three fires 100 feet apart in a triangle or line) (Smoke for day: rubber/oil for dark, live vegetation for white)	X	X		X
Smoke Grenade	X			X
Signal Mirror (directional)	X			X
Space Blanket	X			X
VS-17/Signal Panel	X			X
IR Strobe (MS-2000, Firefly, VIP, Inova, SureFire)		X		X
Glint Tape/Glo-Tape (IR)		X		X
CHEMLITE (visible/IR)		X		X

BEST PRACTICES: Provide Location 14

Search and Rescue Dot (SARDOT)

- Geographic reference point known only to friendly forces that allows IP to pass location over unsecured net; direction is given in magnetic azimuth and distance from the SARDOT

SARDOT example: "I am 250° and 15 clicks from Joe (SARDOT)."

- SARDOTs provided with PR code words
- Units may designate obvious terrain features for points of reference and incorporate into EPA

Search and Rescue Numerical Encryption Grid (SARNEG)

- 10-letter code word that allows IP to pass numbers over unsecured net and pass coordinates without regard for directional indicators; standard operating procedures (SOP) will normally direct coordinate format and SARNEG encoding procedures
- **SARNEG example:**

SARNEG	C	O	M	B	A	T	H	E	L	P
Encode	0	1	2	3	4	5	6	7	8	9

- **MGRS** coordinates 19TDJ2630801125 encoded as "19TDJMHBCLCOOMT."
- **Latitude/longitude** coordinates 263023N 0112517E encoded as "MHBCMBCOOMTO."

BEST PRACTICES: Cardinal Directions 15

First, you must determine where to go!

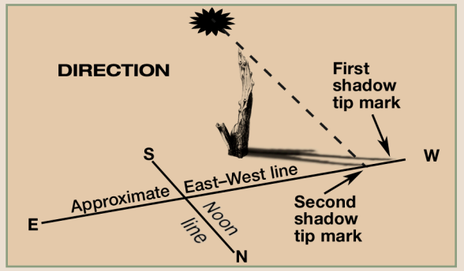
Urban Operations

Home satellite dishes	• Point toward the equator
Islamic prayers	• Face east
Main aircraft runway	• Runs into prevailing winds • Second runway is perpendicular

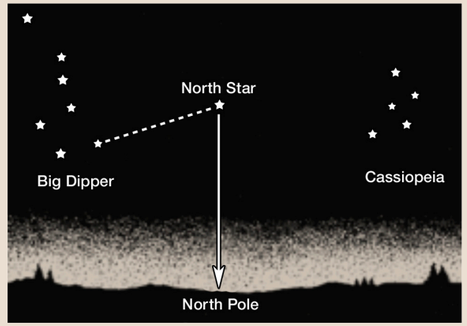
Sun and moon. Rise in the east/set in the west

Stick and shadow. To determine directions:

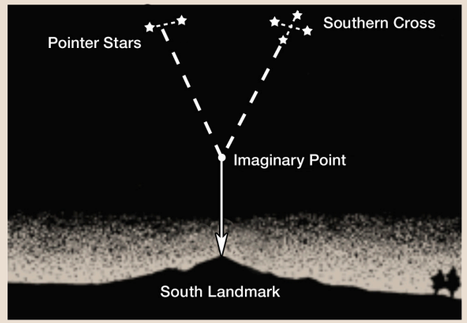
1. Place stick into ground in level/clear area
2. Mark shadow's tip with stone
3. Wait 15 minutes and make a second mark
4. Draw a line through the two marks
5. First mark is west; second mark is east
6. Bisect with north/south-running line



BEST PRACTICES: Cardinal Directions 16



In Northern Hemisphere, find North Star (Polaris)



In Southern Hemisphere, find south intersection

BEST PRACTICES: Evader's Needs 17

Personal Protection

- **Equipment**. Weapons, evasion aids, "S&E kit":

Survival and Evasion (S&E) Equipment		
Metal match	Fixed-blade knife	Multi-tool
Compass/map	Iodine tablets	Water filter
Snare wire	550 Paracord	First aid
Signal devices	Face paint	Plastic bags

- **Clothing**. Environment protection, camouflage
- **Shelter**. Immediate vs. long-term, pre-existing vs. man-made, shelter site, surface insulation
- **Fire**. Tools, cold injuries, food, water, signal

Sustenance

- **Water**. Sources, procure, purify, containers
- **Food**. Ration, animals, insects, plants, identify

Medical

- **Physical**. Cold/heat injuries, illnesses, trauma
- **Psychological**. Will to survive, stay calm, positive mental attitude

Travel

- Decision to travel, location, resection, cardinal direction, maintain bearing, orient map

Communication

- **Evasion Aids**. Pointee-Talkee, Visual Language Translator, blood chit; use for locals
- **Signaling**. Electronic, visual, audio

Evasion

- Avoid detection, recognition, capture

BEST PRACTICES: Protection from the Elements 18

Hot Environments

- **Maintain hydration**. Hydrate before operations and carry at least a day's worth of water; limit foods to energy-producing foods that are easy to digest, such as carbohydrates, when water is low
- **Maintain 98.6°**. Avoid effort during the heat of the day, and travel and work during low light; *stay out of wind and sun*; keep skin covered, keep sleeves down, and wear a hat

Cold Environments

- **COLDER principle**. Keep clothing **C**lean, avoid **O**verheating, **L**oose/layered, stay **D**ry, **E**xamine for damage, and **R**epair if needed
- **Maintain hydration**. Warm fluids are best if possible; resist the urge to not drink when cold
- **Maintain 98.6°**. Stay out of wind, rain, and snow; pull arms inside jacket when at rest to create core warming area, and use natural materials (grasses or leaves) to insulate between layers of clothes or to pile up to burrow into for sleeping; use direct sunlight to warm body

Hydration: "Ration sweat, not water"

- **Requirements**. Usually, 2–3 quarts of water intake is needed for a 68°F day; the factors listed below increase water intake requirement

Heat exposure	Physical activity	Burns
Cold exposure	High altitude	Illness

NOTES: 19

Be mindful of classification when filling out this section.

For more information:

- FM 3-50.1, *Army Personnel Recovery*
- AR 525-28, *Army PR*

CONTACT ARMY PR PROPONENT:

Web: https://combinedarmscenter.army.mil/Pages/2/PersonnelRecovery.aspx

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